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PAGE 1/37 \* RCVD AT 11/2/2006 5:37:23 PM [Eastern Standard Time] \* SVR:USPTO-EFXRF-5/5 \* DNIS:2738300 \* CSID:8584533574 \* DURATION (mm:ss):15-10

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## FAXIMILE TRANSMITTAL COVER SHEET

## DATE:

TO: ATTENTION: S. Theribault ORGANIZATION: Group art unit 2179  
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ORIGINATOR: WILLIAM FUESS ORGANIZATION: ATTORNEY AT LAW  
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## SUBJECT:

NUMBER OF PAGES (including this cover sheet):

## COMMENTS:

1. A copy of our mailed transmittal of August 28, 2006, in the matter of application serial number 10/081,841 is attached.

(signed)

William Fuess

Serial No. 09/081,841

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cited new art (1) which may or may not be found relevant to the (now realized) issuance of a patent on the predecessor application, and +(2) which is in any case now cited by the Examiner as relevant to passage to issuance of the claims of the present application, Applicant solicits the indulgence of the Examiner for another four paragraphs explaining of the purpose(s), and content, of the present, Continuation-in-Part patent application. In this short explanation Applicant begins to contrast his invention with the showings of Smith, and of Technicon.

The present application is directed to extending the concepts taught in the predecessor application. Two key concepts are newly taught and claimed.

The first concept is that the scene data need not be communicated from the client to the server in 2D (plan view) form, and translated to 3D using object based-rules (chairs sit on the floor). Instead, small (light i.e. low polygon count) "proxy" or "stand-in" models and textures can be placed in a 3D scene on the client and rendered in real time for the purpose of specifying the scene, and previewing the final rendering. Then this information is transmitted to the server, where the big high-resolution models and textures are substituted, and where a high-resolution 2D or 3D image is rendered entirely from 3D elements residing on the server, with the images returned to the client for viewing.

In contrast, both the reference art of (1) Smith and (2) the apparent Web3D application as is the subject of the Technicon reference, serve to render a final image on the client for display to the user -- not for the purpose of specifying a scene to a ray-tracing rendering system on a remote server! Web3D

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systems download small models from the server for rendering on the client. And, as will be argued, Smith makes no definitive statement (including at column 5, lines 29-67) as to exactly where any image should be rendered.

Conversely, Applicant teaches that the small models may be resident on the client - and not only the server -- at the start of the session. Applicant system uses proxy or stand-in models on the client. Moreover, Applicant's system renders any stand-ins in real time on the client for the purpose of previewing the final rendering, and of specifying the scene to the server.

2.3 Distinction of Applicant's Invention as Claimed over the Reference art of Smith combined with Technicon

In rejecting Applicant's claim 1 the Examiner finds at page 4, paragraph 2, et seq., that Smith shows at column 5, lines 29-35 each of Applicant's claimed "receiving at another, second, computer...; deriving in the second computer....; and utilizing in the second computer the background scene information... to generate... a perspective view image of the selected object...."

In actual fact, all that Smith states at column 5, line 29, et seq., is that "in other embodiments the [single] computer system 100 is connectable to a network computer so that some or all of its functions may be offloaded to other computers on the network".

This mere suggestion fails to teach or suggest the specific partitionment of functionality that is claimed by Applicant.

Neither does the system of Smith "utilize[e]... in... [any] computer the (1)-(2) background scene information and the identified high-quality object and its parameters and any (4) derived high-quality 3D background scene model to generate and

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render in consideration of (5) a camera position and orientation, (6) a perspective view image of the selected object in the 3D scene". (claim 20) Not only is there no camera position nor orientation, but such limited image rendering as is done in Smith - which, it must be remembered, is directed to supporting component ordering and configuration control - is done by interaction with the user as described at column 9, line 56, et seq. (Applicant thought to potentially add the word "automatically" before "generate and render" in the previously quoted language of his claim 20, but believes that the distinction of the function claimed over Smith is clear enough.)

Moreover, Applicant's claimed "generating and rendering" (transpiring in a second, powerful, network-connected computer) is to the end "wherein the object, having an associated geometry, is rendered with specified parameters in proper (1) scale, (2) position, and (3) rotation within the perspective view image". (claim 20) This supports generation of a "photorealistic image" -- a copy of an example of which photorealistic image generated by Applicant's system was supplied the Examiner of the predecessor application, and which may be retrieved and inspected if desired by the Examiner of the present C-I-P application.

Applicant questions by his reference to, among other figures and text, Figures 11 and 14 of Smith whether objects - here (1) tables and (2) chairs - that are likely correctly positioned in Smith are also - even with involvement of a user operator - susceptible of being rendered with exact appropriate "proper" (1) "scale" and (3) "rotation". Instead (1) it looks like an object - a table or a chair - in Smith in **nearly proper** rotation is simply selected so as to be placed in the scene, and, further, (2) since the scene (see, for example, Figure 8) is fairly

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unitary and without any great depth of field, the selected object may not have to be, and may not be, "scaled" at all. In other words, Smith renders an image that is "good enough" to select and configure office furniture, but is a far pace from the photorealistic images that Applicant claims to generate.

In any case, and as has already been stated, any object image generating and rendering in Smith, or in the reference of Technicon, is not to a "camera position and orientation", as is absolutely necessary if rendering is to be "with the same proper perspective that a conventional photo of the scene would exhibit... if captured by a camera". (claim 20).

In summary, there are images and there are images. Photorealistic image rendering (images having quality beyond those of Smith, or the reference art of Technicon) is known from a time before Applicant's date of filing. However, this (photorealistic) image rendering was normally done in supercomputers which locally received complete parameterization of the (3D) image space and the (generally 3D) objects within the space. Applicant's invention is (1) to generate these photorealistic images remotely on a network and within a generally more powerful, even supercomputer, computer resource of a server (2) in which, and by which, and at which server (a) selection of the image components (the scene, and the room, and the furnishings) and (b) parameterization of the desired view perspective (the camera position, and angle), has been (3) received from a remote client computer. Then, further, (4) the photorealistic image so generated is sent upon the network to the client computer, where it is displayed.

This claimed partitionment of function - which was within the issued patent and which is still within the claims of the

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present application -- is neither taught nor suggested by the reference art of Smith in combination with the reference art of Technicon nor any other of the art of reference.

### 3. Summary

The present amendment and remarks have overcome and discussed each of the bases for the rejections presented in the Office Action. No new subject matter has been introduced by the present amendment.

In consideration of the preceding amendment and accompanying remarks, the present amendment is deemed worthy of entrance, and the present application is deemed in condition for allowance. The timely action of the Examiner to that end is earnestly solicited.

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Applicant's undersigned attorney is at the Examiner's disposal should the Examiner wish to discuss any matter which might expedite prosecution of this case.

Sincerely yours,

*William C. Fuess*

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 Filed Under 37 CFR §1.34(a)

## CERTIFICATE OF MAILING

I hereby certify that this AMENDMENT and the documents referred to as attached therein are being deposited with the United States Postal Service as first class mail postage prepaid addressed to: Box AFTER FINAL, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date written below.

August 28, 2005 William C. Fuess  
Date Typed Name of Person Signature of Person Mailing  
Mailing Correspondence Correspondence